SEQUENCE LISTING

<110> CHUGAI SEIYAKU KABUSHIKI KAISHA

<120> Pharmaceutical composition for treatment of solid cancers

<130> P846

<160> 31

<210> 1

<211> 1013

<212> DNA

<213> Homosapiens

<223> Nucleotide sequence coding for HM1.24 protein antigen

<400> 1

```
gaattcggca cgagggatct gg atg gca tct act tcg tat gac tat tgc            49
                          Met Ala Ser Thr Ser Tyr Asp Tyr Cys
                           1               5

aga gtg ccc atg gaa gac ggg gat aag cgc tgt aag ctt ctg ctg ggg        97
Arg Val Pro Met Glu Asp Gly Asp Lys Arg Cys Lys Leu Leu Leu Gly
 10               15               20               25

ata gga att ctg gtg ctc ctg atc atc gtg att ctg ggg gtg ccc ttg        145
Ile Gly Ile Leu Val Leu Leu Ile Ile Val Ile Leu Gly Val Pro Leu
               30               35               40

att atc ttc acc atc aag gcc aac agc gag gcc tgc cgg gac ggc ctt        193
Ile Ile Phe Thr Ile Lys Ala Asn Ser Glu Ala Cys Arg Asp Gly Leu
               45               50               55

cgg gca gtg atg gag tgt cgc aat gtc acc cat ctc ctg caa caa gag        241
Arg Ala Val Met Glu Cys Arg Asn Val Thr His Leu Leu Gln Gln Glu
           60               65               70

ctg acc gag gcc cag aag ggc ttt cag gat gtg gag gcc cag gcc gcc        289
Leu Thr Glu Ala Gln Lys Gly Phe Gln Asp Val Glu Ala Gln Ala Ala
           75               80               85

acc tgc aac cac act gtg atg gcc cta atg gct tcc ctg gat gca gag        337
Thr Cys Asn His Thr Val Met Ala Leu Met Ala Ser Leu Asp Ala Glu
 90               95               100              105

aag gcc caa gga caa aag aaa gtg gag gag ctt gag gga gag atc act        385
Lys Ala Gln Gly Gln Lys Lys Val Glu Glu Leu Glu Gly Glu Ile Thr
               110              115              120

aca tta aac cat aag ctt cag gac gcg tct gca gag gtg gag cga ctg        433
```

```
Thr Leu Asn His Lys Leu Gln Asp Ala Ser Ala Glu Val Glu Arg Leu
            125             130             135
aga aga gaa aac cag gtc tta agc gtg aga atc gcg gac aag aag tac    481
Arg Arg Glu Asn Gln Val Leu Ser Val Arg Ile Ala Asp Lys Lys Tyr
            140             145             150
tac ccc agc tcc cag gac tcc agc tcc gct gcg gcg ccc cag ctg ctg    529
Tyr Pro Ser Ser Gln Asp Ser Ser Ser Ala Ala Ala Pro Gln Leu Leu
            155             160             165
att gtg ctg ctg ggc ctc agc gct ctg ctg cag tga gatcccagga         575
Ile Val Leu Leu Gly Leu Ser Ala Leu Leu Gln
170             175             180
agctggcaca tcttggaagg tccgtcctgc tcggcttttc gcttgaacat tcccttgatc   635
tcatcagttc tgagcgggtc atggggcaac acggttagcg gggagagcac ggggtagccg   695
gagaagggcc tctggagcag gtctggaggg gccatggggc agtcctgggt ctggggacac   755
agtcgggttg acccagggct gtctccctcc agagcctccc tccggacaat gagtcccccc   815
tcttgtctcc caccctgaga ttgggcatgg ggtgcggtgt ggggggcatg tgctgcctgt   875
tgttatgggt ttttttgcg gggggggttg cttttttctg gggtctttga gctccaaaaa   935
aataaacact tcctttgagg gagagcacac cttaaaaaaa aaaaaaaaaa aaaaaaaaaa   995
aaaattcggg cggccgcc                                               1013
```

<210> 2
<211> 180
<212> PRT
<213> Homosapiens
<223> Amino acid sequence of HM1.24 protein antigen
<400> 2

```
Met Ala Ser Thr Ser Tyr Asp Tyr Cys Arg Val Pro Met Glu Asp Gly
 1               5               10              15
Asp Lys Arg Cys Lys Leu Leu Leu Gly Ile Gly Ile Leu Val Leu Leu
            20              25              30
Ile Ile Val Ile Leu Gly Val Pro Leu Ile Ile Phe Thr Ile Lys Ala
        35              40              45
Asn Ser Glu Ala Cys Arg Asp Gly Leu Arg Ala Val Met Glu Cys Arg
    50              55              60
Asn Val Thr His Leu Leu Gln Gln Glu Leu Thr Glu Ala Gln Lys Gly
65              70              75              80
Phe Gln Asp Val Glu Ala Gln Ala Ala Thr Cys Asn His Thr Val Met
```

```
                    85                    90                    95
Ala Leu Met Ala Ser Leu Asp Ala Glu Lys Ala Gln Gly Gln Lys Lys
            100                   105                   110
Val Glu Glu Leu Glu Gly Glu Ile Thr Thr Leu Asn His Lys Leu Gln
            115                   120                   125
Asp Ala Ser Ala Glu Val Glu Arg Leu Arg Arg Glu Asn Gln Val Leu
        130                   135                   140
Ser Val Arg Ile Ala Asp Lys Lys Tyr Tyr Pro Ser Ser Gln Asp Ser
145                   150                   155                   160
Ser Ser Ala Ala Ala Pro Gln Leu Leu Ile Val Leu Leu Gly Leu Ser
                165                   170                   175
Ala Leu Leu Gln
            180
```

<210> 3

<211> 39

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Foward primer Initial(BamHI)

<400> 3

```
tttctcgaga tgagacgcta caagctcttt ctcatgttc                      39
```

<210> 4

<211> 97

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Foward primer 1-97

<400> 4

```
atgagacgct acaagctctt tctcatgttc tgtatggccg gcctgtgcct catctccttc      60
ctgcacttct tcaagaccct gtcctatgtc accttcc                              97
```

<210> 5

<211> 100

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Foward primer 78-177

<400> 5

cctgtcctat gtcaccttcc cacgagaact ggcctccctc agccctaacc tggtgtccag   60
ctttttctgg aacaatgccc cggtcacgcc ccaggccagc   100

<210> 6

<211> 102

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Foward primer 158-259

<400> 6

cggtcacgcc ccaggccagc cctgagccag gaggccctga cctgctgcgt accccactct   60
actcccactc gcccctgctg cagccgctgc cgcccagcaa gg   102

<210> 7

<211> 93

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Foward primer 239-331

<400> 7

agccgctgcc gcccagcaag gcggccgagg agctccaccg ggtggacttg gtgctgcccg   60
aggacaccac cgagtatttc gtgcgcacca agg   93

<210> 8

<211> 98

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Foward primer 312-409

<400> 8

gtatttcgtg cgcaccaagg ctggaggcgt ctgcttcaaa cccggcacca agatgctgga   60

gagaccgcct ccgggacgac cggaggagaa gcctgagg   98

<210> 9

<211> 83

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Foward primer 390-472

<400> 9

accggaggag aagcctgagg gggccaacgg atcctcggcc cggcgaccac cccggtacct   60

cctgagcgcc cgggagcgca cgg   83

<210> 10

<211> 104

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Foward primer 453-556

<400> 10

gagcgcccgg gagcgcacgg ggggccgagg tgcacgacgc aagtgggtgg agtgcgtgtg   60

tctgcccgga tggcacggac ccagctgcgg cgtgcccact gtgg   104

<210> 11

<211> 84

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Foward primer 535-618

<400> 11

agctgcggcg tgcccactgt ggtgcagtat tccaacctgc ctaccaagga gcggctggtg   60

cccagggagg tgccgcgccg cgtc   84

<210> 12

<211> 99

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Foward primer 598-696

<400> 12

agggaggtgc cgcgccgcgt cattaatgct atcaacgtca accacgagtt cgacctgctg   60

gacgtgcgct tccacgagct gggcgacgtg gtggacgcc   99

<210> 13

<211> 101

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Foward primer 677-777

<400> 13

tgggcgacgt ggtggacgcc tttgtggtgt gcgagtccaa cttcacggct tatggggagc   60

cgcggccgct caagttccgg gagatgctga ccaatggcac c   101

<210> 14

<211> 63

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Foward primer 758-820

<400> 14

agatgctgac caatggcacc ttcgagtaca tccgccacaa ggtgctctat gtcttcctgg   60

acc   63

<210> 15
<211> 70
<221> DNA
<213> Artificial Sequence
<220>
<221>
<222>
<223> Foward primer 801-870
<400> 15

gctctatgtc ttcctggacc actttcctcc tggaggacga caagatggat ggatcgccga   60
cgactacctg   70

<210> 16
<211> 37
<221> DNA
<213> Artificial Sequence
<220>
<221>
<222>
<223> Reverse primer End(HindIII)
<400> 16

tttaagctta ctagacttcc gcctcgtcca gttttcc   37

<210> 17
<211> 109
<221> DNA
<213> Artificial Sequence
<220>
<221>
<222>
<223> Reverse primer 1596-1488
<400> 17

ctagacttcc gcctcgtcca gttttccccg agcaggcggt cttccttcag gacccctgtg   60
gcgccatcct cccgcagccg tgctcctggg ctcctggtag gggttgtcc   109

<210> 18
<211> 102
<221> DNA
<213> Artificial Sequence

<220>

<221>

<222>

<223> Reverse primer 1508-1407

<400> 18

ggctcctggt aggggttgtc cagaaggtag tggaaccggt cgtagttctt cagcaggtac   60

ttgggcgcat acatgtgctc gctggggtct gcaggcgggt ac   102

<210> 19

<211> 104

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Reverse primer 1427-1324

<400> 19

ctggggtctg caggcgggta ctcttgctgc gtgccgtcga accagccccc ggtgcggatc   60

aggccgcgga tgtagttcag gtcccgcttg tcctcgtagt cacc   104

<210> 20

<211> 101

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Reverse primer 1344-1244

<400> 20

ccgcttgtcc tcgtagtcac cccagcgtgg gaagtcgcca ttctgggcgg acacgagctt   60

gaagtagatg ccctcgggcg tgaagcacca ggagcagtgc c   101

<210> 21

<211> 102

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Reverse primer 1264-1162

<400> 21

tgaagcacca ggagcagtgc cagccggcga agtgaagggg gctgcccagc gaccactgca   60

ccaggatgtg tccggtgcgg ttctcatact gtctgaagtt gg   102

<210> 22

<211> 99

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Reverse primer 1182-1084

<400> 22

ctcatactgt ctgaagttgg gcatggtgta gtattggcgg cggcgcaggc ggatgccgtc   60

cagcccatac actgcctgca gcatgtccac cgtgcagcc   99

<210> 23

<211> 100

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Reverse primer 1103-1004

<400> 23

agcatgtcca ccgtgcagcc tgacaccacc tccagggtgc ccggttgctt ccaaaagaat   60

ccgtagagcg acgtgcgcat gtggaaggcg aagggctcgg   100

<210> 24

<211> 102

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Reverse primer 1023-922

<400> 24

gtggaaggcg aagggctcgg tccagccatc gtagagcttg aggaacagga cgccgtcacg   60

ggccgggatc tcgtccgcat cgtcaatgat gaagacgtcg tc   102

<210> 25
<211> 91
<221> DNA
<213> Artificial Sequence
<220>
<221>
<222>
<223> Reverse primer 941-851
<400> 25

tcaatgatga agacgtcgtc gggccgcagg ttgcgcagcc gcgagacgcc gtcctgggtg   60
aggaaggtgc gcaggtagtc gtcggcgatc c   91

<210> 26
<211> 70
<221> DNA
<213> Artificial Sequence
<220>
<221>
<222>
<223> Reverse primer 870-801
<400> 26

caggtagtcg tcggcgatcc atccatcttg tcgtcctcca ggaggaaagt ggtccaggaa   60
gacatagagc   70

<210> 27
<211> 81
<221> DNA
<213> Artificial Sequence
<220>
<221>
<222>
<223> Reverse primer 380-300
<400> 27

ggcggtctct ccagcatctt ggtgccgggt ttgaagcaga cgcctccagc cttggtgcgc   60
acgaaatact cggtggtgtc c   81

<210> 28
<211> 80

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Reverse primer 320-241

<400> 28

acgaaatact cggtggtgtc ctcgggcagc accaagtcca cccggtggag ctcctcggcc   60

gccttgctgg gcggcagcgg   80

<210> 29

<211> 68

<221> DNA

<213> Artificial Sequence

<220>

<221>

<222>

<223> Reverse primer Bam-359

<400> 29

tttggatccg ttggcccccct caggcttctc ctccggtcgt cccggaggcg gtctctccag   60

catcttgg   68

<210> 30

<211> 1596

<221> DNA

<213> Homo sapiens

<220>

<223> Nucleotide sequence encoding human GnTIII

<400> 30

atgagacgct acaagctctt tctcatgttc tgtatggccg gcctgtgcct catctccttc   60

ctgcacttct tcaagaccct gtcctatgtc accttccccc gagaactggc ctccctcagc   120

cctaacctgg tgtccagctt tttctggaac aatgccccgg tcacgcccca ggccagcccc   180

gagccaggag gccctgacct gctgcgtacc ccactctact cccactcgcc cctgctgcag   240

ccgctgccgc ccagcaaggc ggccgaggag ctccaccggg tggacttggt gctgcccgag   300

gacaccaccg agtatttcgt gcgcaccaag gccggcggcg tctgcttcaa acccggcacc   360

aagatgctgg agaggccgcc cccgggacgg ccggaggaga gcctgaggg ggccaacggc   420

tcctcggccc ggcggccacc ccggtacctc ctgagcgccc gggagcgcac ggggggccga   480

ggcgcccggc gcaagtgggt ggagtgcgtg tgcctgcccg gctggcacgg acccagctgc   540

```
ggcgtgccca ctgtggtgca gtactccaac ctgcccacca aggagcggct ggtgcccagg    600
gaggtgccgc gccgcgtcat caacgccatc aacgtcaacc acgagttcga cctgctggac    660
gtgcgcttcc acgagctggg cgacgtggtg gacgcctttg tggtgtgcga gtccaacttc    720
acggcttatg gggagccgcg gccgctcaag ttccgggaga tgctgaccaa tggcaccttc    780
gagtacatcc gccacaaggt gctctatgtc ttcctggacc acttcccgcc cggcggccgg    840
caggacggct ggatcgccga cgactacctg cgcaccttcc tcacccagga cggcgtctcg    900
cggctgcgca acctgcggcc cgacgacgtc ttcatcattg acgatgcgga cgagatcccg    960
gcccgtgacg gcgtcctttt cctcaagctc tacgatggct ggaccgagcc cttcgccttc   1020
cacatgcgca cgtcgctcta cggcttcttc tggaagcagc cgggcaccct ggaggtggtg   1080
tcaggctgca cggtggacat gctgcaggca gtgtatgggc tggacggcat ccgcctgcgc   1140
cgccgccagt actacaccat gcccaacttc agacagtatg agaaccgcac cggccacatc   1200
ctggtgcagt ggtcgctggg cagccccctg cacttcgccg gctggcactg ctcctggtgc   1260
ttcacgcccg agggcatcta cttcaagctc gtgtccgccc agaatggcga cttcccacgc   1320
tggggtgact acgaggacaa gcgggacctg aactacatcc gcggcctgat ccgcaccggg   1380
ggctggttcg acggcacgca gcaggagtac ccgcctgcag accccagcga gcacatgtat   1440
gcgcccaagt acctgctgaa gaactacgac cggttccact acctgctgga caacccctac   1500
caggagccca ggagcacggc ggcgggcggg tggcgccaca ggggtcccga gggaaggccg   1560
cccgcccggg gcaaactgga cgaggcggaa gtctag                              1596
<210> 31
<211> 1596
<221> DNA
<213> Artificial Sequence
<220>
<221>
<222>
<223> Artificial nucleotide sequence encoding human GnTIII
<400> 31
atgagacgct acaagctctt tctcatgttc tgtatggccg gcctgtgcct catctccttc     60
ctgcacttct tcaagaccct gtcctatgtc accttcccac gagaactggc ctccctcagc    120
cctaacctgg tgtccagctt tttctggaac aatgccccgg tcacgcccca ggccagccct    180
gagccaggag gccctgacct gctgcgtacc ccactctact cccactcgcc cctgctgcag    240
ccgctgccgc ccagcaaggc ggccgaggag ctccaccggg tggacttggt gctgcccgag    300
gacaccaccg agtatttcgt gcgcaccaag ctggaggcg tctgcttcaa acccggcacc    360
aagatgctgg agagaccgcc tccgggacga ccggaggaga agcctgaggg ggccaacgga    420
tcctcggccc ggcgaccacc ccggtacctc ctgagcgccc gggagcgcac ggggggccga    480
ggtgcacgac gcaagtgggt ggagtgcgtg tgtctgcccg gatggcacgg acccagctgc    540
```

```
ggcgtgccca ctgtggtgca gtattccaac ctgcctacca aggagcggct ggtgcccagg    600
gaggtgccgc gccgcgtcat taatgctatc aacgtcaacc acgagttcga cctgctggac    660
gtgcgcttcc acgagctggg cgacgtggtg gacgcctttg tggtgtgcga gtccaacttc    720
acggcttatg gggagccgcg gccgctcaag ttccgggaga tgctgaccaa tggcaccttc    780
gagtacatcc gccacaaggt gctctatgtc ttcctggacc actttcctcc tggaggacga    840
caagatggat ggatcgccga cgactacctg cgcaccttcc tcacccagga cggcgtctcg    900
cggctgcgca acctgcggcc cgacgacgtc ttcatcattg acgatgcgga cgagatcccg    960
gcccgtgacg gcgtcctgtt cctcaagctc tacgatggct ggaccgagcc cttcgccttc   1020
cacatgcgca cgtcgctcta cggattcttt tggaagcaac cgggcaccct ggaggtggtg   1080
tcaggctgca cggtggacat gctgcaggca gtgtatgggc tggacggcat ccgcctgcgc   1140
cgccgccaat actacaccat gcccaacttc agacagtatg agaaccgcac cggacacatc   1200
ctggtgcagt ggtcgctggg cagccccctt cacttcgccg gctggcactg ctcctggtgc   1260
ttcacgcccg agggcatcta cttcaagctc gtgtccgccc agaatggcga cttcccacgc   1320
tggggtgact acgaggacaa gcgggacctg aactacatcc gcggcctgat ccgcaccggg   1380
ggctggttcg acggcacgca gcaagagtac ccgcctgcag accccagcga gcacatgtat   1440
gcgcccaagt acctgctgaa gaactacgac cggttccact accttctgga caacccctac   1500
caggagccca ggagcacggc tgcgggagga tggcgccaca ggggtcctga aggaagaccg   1560
cctgctcggg gaaaactgga cgaggcggaa gtctag                              1596
```